

4. Consider the following argument:

Premise: Since I moved to my new apartment last year, my neighbors have had parties every Saturday night.

Premise: Tomorrow is Saturday.

Conclusion: My neighbors will have a party tomorrow night.

(a) Is the argument deductive or inductive?

(b) If applicable, is the argument valid?

(c) If applicable, is the argument sound?

5. In the last year, the U.S. unemployment rate rose from 5% to 9%.

(a) What was the absolute change in the unemployment rate? (Your answer should have units of “percentage *points*”)

(b) What was the relative change in the unemployment rate? Your answer should be written in the form of a percentage.

6. Let A be the set of all negative integers, let B be the set of all natural numbers, and let C be the set of all integers.

(a) Draw a Venn diagram showing the relationship between the sets A , B , and C .

(b) Describe the numbers (if any) in set C but neither in A nor B .

(c) Give an example of a number that is not in any of the sets A , B , or C .

7. Write the following numbers in scientific notation:

(a) 103,800

(b) .023

(c) 35%

8. Boulder's average yearly rainfall is 70% less than the average yearly rainfall in Portland. If the average yearly rainfall in Portland is 60 inches, what is the average yearly rainfall in Boulder?